

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method to perform routing in a network, comprising:  
receiving a packet to be routed to a destination at a an intermediate network node configured to perform basic routing services for said packet;  
determining whether said packet requires advanced routing services to route said packet to said destination which are not included in said basic routing services; ~~and~~  
sending said packet from said intermediate network node to a hosted advanced routing server configured to perform said advanced routing services; and  
routing said packet to said destination from at least one of said intermediate node and said advanced routing server.
2. (Original) The method of claim 1, wherein said sending is performed over a virtual connection.
3. (Original) The method of claim 2, wherein said virtual connection is secure.
4. (Canceled)
5. (Currently Amended) A method to perform routing in a network, comprising:  
receiving a packet to be routed to a destination at a an intermediate network node configured to perform basic routing services for said packet;  
determining whether said packet requires advanced routing services to route said packet to said destination which are not included in said basic routing services, with said advanced routing services comprising dynamic routing;

sending a request for advanced routing information to a hosted advanced routing server configured to perform said advanced routing services;

receiving said advanced routing information from said hosted advanced routing server;  
and

routing said packet to said destination from said intermediate network node using said advanced routing information.

6. (Original) The method of claim 5, wherein said sending and receiving are performed over a virtual connection.

7. (Original) The method of claim 6, wherein said virtual connection is secure.

8. (Currently Amended) A method to perform routing in a network, comprising:  
receiving a packet to be routed to a destination and a request for advanced routing information at a hosted advanced routing server from an intermediate node configured to perform basic routing services for said packet, said hosted advanced routing server configured to perform advanced routing services required to route said packet to said destination which are not included in said basic routing services;

determining a packet classification for said packet;

retrieving advanced routing information corresponding to said packet classification; and

routing said packet to said destination using said advanced routing information.

9. (Original) The method of claim 8, wherein said packet is received and routed using a virtual connection.

10. (Original) The method of claim 8, wherein said virtual connection is secure.

11. (Original) The method of claim 8, wherein said retrieving comprises retrieving said routing information from a routing table.

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12. (Currently Amended) A method to perform routing in a network, comprising:
- receiving a request for advanced routing information for a packet to be routed to a destination at a hosted advanced routing server from an intermediate node configured to perform basic routing services for said packet, said hosted advanced routing server configured to perform advanced routing services required to route said packet to said destination which are not included in said basic routing services;
  - determining a packet classification for said packet;
  - retrieving advanced routing information corresponding to said packet classification; and
  - sending said advanced routing information to said intermediate node.
13. (Original) The method of claim 12, wherein said packet is received and routed using a virtual connection.
14. (Original) The method of claim 13, wherein said virtual connection is secure.
15. (Original) The method of claim 12, wherein said retrieving comprises retrieving said routing information from a routing table.
16. (Currently Amended) A method to perform advanced network services in a network, comprising:
- receiving a request for an advanced network service for a packet to be routed to a destination at a hosted advanced routing server from an intermediate node over a first virtual connection, said intermediate node configured to perform basic routing services for said packet, said hosted advanced routing server configured to perform advanced routing services required to route said packet to said destination which are not included in said basic routing services;
  - performing said advanced network service for said packet; and
  - sending said packet over a second virtual connection.
17. (Original) The method of claim 16, wherein said first and second virtual connections are secure.

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18. (Currently Amended) An article comprising:
- a storage medium;
  - said storage medium including stored instructions that, when executed by a processor, result in performing routing in a network by receiving a packet to be routed to a destination at ~~a~~ an intermediate network node configured to perform basic routing services for said packet, determining whether said packet requires advanced routing services to route said packet to said destination which are not included in said basic routing services, ~~and~~ sending said packet from said intermediate network node to a hosted advanced routing server configured to perform said advanced routing services, and routing said packet to said destination from at least one of said intermediate node and said advanced routing server.
19. (Currently Amended) The article of claim 18, wherein the stored instructions, when executed by ~~a~~ the processor, further result in sending said packet over a secure virtual connection.
20. (Currently Amended) The article of claim 18, wherein the stored instructions, when executed by ~~a~~ the processor, further result in receiving said packet with advanced routing information, and sending said packet to another network node using said advanced routing information.
21. (Currently Amended) An article comprising:
- a storage medium;
  - said storage medium including stored instructions that, when executed by a processor, result in performing routing in a network by receiving a packet to be routed to a destination at ~~a~~ an intermediate network node configured to perform basic routing services for said packet, determining whether said packet requires advanced routing services to route said packet to said destination which are not included in said basic routing services, with said advanced routing services comprising dynamic routing, sending a request for advanced routing information to a hosted advanced routing server configured to perform said advanced routing services, receiving said advanced routing information from said hosted advanced routing server.

and routing said packet to said destination from said intermediate network node using said advanced routing information.

22. (Currently Amended) The article of claim 21, wherein the stored instructions, when executed by ~~a~~ the processor, further result in sending and receiving said request and said advanced routing information, respectively, over a secure virtual connection.

23. (Currently Amended) An article comprising:

a storage medium;

said storage medium including stored instructions that, when executed by a processor, result in performing routing in a network by receiving a packet to be routed to a destination and a request for advanced routing information at a hosted advanced routing server from an intermediate node configured to perform basic routing services for said packet, said hosted advanced routing server configured to perform advanced routing services to route said packet to said destination which are not included in said basic routing services, determining a packet classification for said packet, retrieving advanced routing information corresponding to said packet classification, and routing said packet to said destination using said advanced routing information.

24. (Currently Amended) The article of claim 23, wherein the stored instructions, when executed by ~~a~~ the processor, further result in receiving and routing over a secure virtual connection.

25. (Currently Amended) A method to perform routing in a network, comprising:

receiving a packet to be routed to a destination at ~~a~~ an intermediate network node configured to perform routing services for said packet;

determining whether said packet requires advanced network services prior to routing said packet to said destination which are not included in said routing services; ~~and~~

sending said packet from said intermediate node to an advanced network services provider configured to perform said advanced routing network services; and

routing said packet to said destination from at least one of said intermediate node and said advanced network services provider.

26. (Original) The method of claim 25, wherein said sending is performed over a secure virtual connection.

27. (Currently Amended) An article comprising:

a storage medium;

said storage medium including stored instructions that, when executed by a processor, result in performing advanced network services at an advanced network services provider in a network by receiving a request for an advanced network service for a packet to be routed to a destination over a first virtual connection from an intermediate node configured to perform routing services for said packet, said advanced network service not included in said routing services, performing said advanced network service for said packet prior to routing said packet to said destination, and sending said packet over a second virtual connection.

28. (Currently Amended) The article of claim 27, wherein the stored instructions, when executed by a the processor, further result in receiving and sending over a secure virtual connection.

29. (Currently Amended) A system, comprising:

a communication medium;

a network node configured to perform basic routing services to connect to said communication medium, said network node to receive a packet to be routed to a destination and determine whether said packet requires advanced routing services or advanced network services not included in said basic routing services; and

a hosted advanced routing server to connect to said communication medium, said hosted advanced routing server to provide said advanced routing services or advanced network services for said packet prior to said packet being routed to said destination.

30. (Previously Presented) The system of claim 29, wherein said network node determines whether said packet requires said advanced routing services or advanced network services, said network node to send said packet and a request for such services over said communication medium.

31. (Previously Presented) The system of claim 30, wherein said hosted advanced routing server receives said packet and request, and processes said packet in accordance with said request.

32. (Previously Presented) The system of claim 29, wherein said network node determines whether said packet requires said advanced routing services or advanced network services, sends a request for such services over said communication medium, receives information to perform such services from said hosted advanced routing server, and processes said packet using said information.

33. (Previously Presented) The system of claim 29, wherein said network node establishes a virtual connection to said hosted advanced routing server over said communication medium.

34. (Previously Presented) The system of claim 33, wherein said virtual connection comprises a secure virtual connection.

35-38. (Canceled)